



Environmental Protection Agency

2200 Churchill Road, Springfield, Illinois 62706

MEMORANDUM

TO: Thomas Cavanagh, Eugene Theios
FROM: Linda Kissinger *LK*
DATE: December 15, 1980

EPA Region 5 Records Ctr.



285902

SUBJECT: PROCESS ALLIANCE PARTNERSHIP PERMIT APPLICATION CONSIDERATIONS

1. PAP proposes "spent caustic scrubber stream combined with spent acids containing metal ions yield innocuous liquid and solid wastes that are non-hazardous". Per conversation with Wally El-Beck, it seems the scrubber stream lacks information identifying it as hazardous or non-hazardous while the spent acids and etchants are hazardous. Also, whenever spent caustic and spent acid, specifically sodium sulfide and sulfuric acid, are combined the result yields hydrogen sulfide gas (H_2S) which is toxic by inhalation and a strong irritant to the eyes and mucus membranes. H_2S is highly flammable and a dangerous fire risk. Its explosive limits in air are 4.3 - 46%. Tolerance in air is 10 ppm. Similarly, hydrogen cyanide gas (HCN) results from a combination of sodium cyanide and the spent acid. The flash point of HCN is $0^{\circ}F$ and the autoignition temperature is $1000^{\circ}F$. It is highly toxic by ingestion, inhalation and skin absorption. HCN is flammable and a dangerous fire risk. Its explosive limits in air are 6 - 41%. Tolerance in air is 10 ppm. Both of these reactions are independent of pH.
2. Number 1 above has implications for location - facility is directly under I-80 bridge crossing the Des Plaines River.
3. Number 1 above implies health risk to workers and neighbors. Complaints have been documented by the City of Joliet, LFOS, WPC FOS, and Land Permit Section. IEPA Emergency Response has set up an air monitor at the Corps of Engineers Office adjacent to PAP. Results are not expected for two weeks.
4. PAP is not in compliance with Joliet Building Code requirements since a permit for an industrial sewer connection has not been obtained. A temporary permit to discharge into an MSD underground connection has been obtained from Joliet. Application for permanent permit is pending. Per conversations with the city and IEPA, Joliet is leaning towards denying the permanent permit. PAP does have an IEPA - WPC permit to discharge in Joliet MSD (1980EA-0827). However, the city has final authority over discharge connections. Permit was denied by the city and sewer connection was reportedly stopped on November 19, 1980.
5. Contact has been established between PAP and DAPC. Two violations were cited 7/23/80. PAP asserts that their facility is not in violation of any existing IPCB emission standards or other specific limitations.

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6. The current supplemental permit for receipt of spent caustic lapsed November 6, 1980. A renewal application has been received. The identification of sodium sulfide as a key component makes this a hazardous waste.

7. There are no current supplemental permits on file for receipt of spent acid (pickling liquor) and spent etchant utilized in PAP's process.

8. A report from MSD has been received indicating PAP exceeded discharge limitations, probably by passing the filter press, on at least one occasion. According to Wally El-Beck, this indicates cyanide and solids may have been discharged with the liquid portion of the process (feed slurry) to MSD. A temporary (1 month) supplemental permit (#802070) was obtained to dispose of the feed slurry at Chicago/Land & Lakes #3. This permit expired on 9/22/80. It is unknown at this time whether the filter press is on line and/or operating correctly.

9. A permit (80-1485) has been obtained to dispose of the filter cake at Chicago/Land & Lakes #3 and Joliet/Lockport Trucking, expiring on 6/27/81 and 7/21/81, respectively.

10. Complaints from PAP's neighbors regarding discharge by PAP of materials into an on-site MSD-Joliet manhole have been received by LFOS and Land Permit Section. Agency personnel have yet to witness an incident.